NCADAC Working Group 1

Charge to the Group: This ad hoc working group would develop proposal(s) about the scope and content of the NCA 2013 report, phasing of products, and suggested changes to the NCA Interim Strategy drafted by the INCA Task Force.

Group Members: Jerry Melillo (Chair); Dan Abbasi; Lynne Carter; Mary Gade; David Gustafson; David Hales (Strategic Plan Subgroup Chair); Sharon Hays; Rattan Lal; Joann Leong; Susi Moser; Phil Mote; Andy Rosenberg; Joel Smith; Gary Yohe; John Balbus; Tom Karl; Cathleen Kelly; Linda Lawson; Chet Koblinsky; Pat Jacobberger-Jellison; John Hall; Bill Hohenstein.

General Guidance for 2013 Report and for Longer NCA Process

The working group began by considering options for the timing and phasing of the Assessment activities that were provided in powerpoint form by the Interagency National Climate Assessment Task Force (INCA TF), including a number of helpful diagrams that appear at the end of this document. The group concluded that a hybrid of the INCA TF option "2" - 2013 Expanded with New Elements, Post 2013 Full Vision and option "3" – Continuous Topical Product Stream, New Content, Light Snapshots was an appropriate balance of what was doable by 2013 and a strong desire to move forward quickly with the new and innovative vision and building towards a robust and continuing Assessment process over time.

The group concluded that for the 2013 document the primary audience is the President and the Congress (as required in the GCRA) but that the NCADAC should make an effort to appeal to a broader audience with plain-English presentation of the material and use of multiple formats, including web-based formats. There is strong support for starting with the 2009 Global Climate Change Impacts (GCCI) report as information base and building from that point, rather than starting from scratch. This report has proven to be highly useful and well received by both government and non-government stakeholders, so it is a useful starting place for discussion. Further, its editorial and graphic style can set the tone for NCA documents to make it easier to meet the NCADAC's very ambitious deadlines.

Although the 2000 report will be the foundation, there should be a focus on what is new since 2009, including new science, synthesis, impacts research, etc. Because of the commitment to a risk-based framing and a focus on decision support for this new Assessment, where appropriate issues should be presented in a risk/vulnerability frame. This means that information is presented in the context of protecting communities and resources that citizens and decision makers care about, as well as minimizing impacts to those who are most vulnerable.

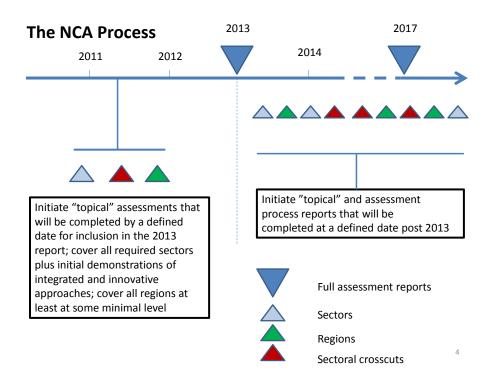
Longer Term Process

In order to ensure that the Assessment is an ongoing process, the group recommends defining a set of ongoing products so that expectations for reports and information steadily increase over time rather than focusing on a preparation of individual reports every four years. It is recognized

that rebuilding the Assessment infrastructure on a regular basis is inefficient, and that a much more effective job can be done from both a scientific perspective and a stakeholder engagement perspective if there are milestones for delivery of Assessment products on a regular basis. Further, it is important to build capacity and develop partnerships in regions and sectors and that requires long-term support for relationships.

Recommendation 1: Timing and Phasing:

- A. Implement a hybrid of Options "2" and "3": meet all of the requirements of the GCRA plus demonstrate the "new" approach to Assessments through adding a limited number of integrated, topical reports and an initial version of new regional assessments for 2013, begin development of indicators, web-deployment, etc.
- B. Establish ongoing, regular deadlines for topical reports and new data sources that will appear over time, including more detailed regional, sectoral and cross-cutting assessments on an ongoing basis punctuated by periodic larger Assessment efforts, optimally aligned with efforts by the Intergovernmental Panel on Climate Change (IPCC). Ramp up of Assessment activities would continue to accelerate after 2013.



<u>RECOMMENDATION 2</u>: Adopt the following guidance for the scope and outline, subject to changes agreed to by the Committee during the May 20 meeting, with the Executive Secretariat to begin work as soon as possible to develop recommendations for implementation.

Scope and Outline of the 2013 Report:

This section includes the workgroup's proposal for the outline and approach to the 2013 report. Although this outline will undoubtedly change over time, it is critical that the NCADAC come to an agreement quickly about what the components of the 2013 report will be. These components may very well appear in a different order or be re-combined in new ways, but the following provides the group's view of the contents of the first major deliverable of the NCADAC.

A. Introduction to the Report:

- Purpose, background scope, new approach/process
- · Integrated risk-based framing
- Approaches to scenarios
- Indicators as a major new focus
- International context and options

B. II. Climate Change Science:

- · Summary of what is known and not known, including uncertainties
- Historical and future trends, including changes in variability
- Focus on **what is new** since 2009 e.g., extreme events, sea level, implications of CMIP 5 and relationship to CMIP 3;
- FAQs/addressing misperceptions framing

C. III. Impacts on Sectors:

- Water resources
- Energy supply and use
- Transportation
- Agriculture and food security
- Forestry and carbon management
- Ecosystems and biodiversity (with links to ecosystem services)
- Human health

Sectoral Strategy:

Note that GCRA requires an analysis of the effects of global change on the natural environment, agriculture, energy production and use, land and water resources, transportation, human health and welfare, human social systems, and biological diversity; all of these topics are covered either in sectors listed above or in the cross-sectoral topics in the next section.

Sectoral reports should

• Start with the 2009 report and any relevant Synthesis and Assessment Products from the Climate Change Science Program as a base and focus on **new insights**;

- Identify where key sectoral vulnerabilities come from, **including some important** intersectoral and underlying stresses;
- Focus on issues of policy relevance using a risk based framing or prioritization process for topics selected;
- Consider international implications of climate for the sector
- Scope information that would be required for a serious future evaluation of adaptation and mitigation issues in the sector;
- To the extent feasible, the proposed sectoral approach should be vetted with relevant professional societies and interest groups; these groups should be engaged in activities that lead to long-term assessment capacity as a result of this initial 2013 report.

D. IV. Sectoral cross-cuts –

This category of sectoral analyses is intended to showcase the integrated nature of climate impacts, risks, and opportunities and be more consistent with a decision-based, real-world view of climate issues. Historically, sectoral chapters were focused within a more traditional sector-by-sector analysis of impacts, so some of this work may be more difficult to complete by 2013. A final decision to move forward on these is dependent on a clear source of funding and ability to support the assessment work in the near term. This may mean that the report on some of these topics for 2013 will be more of a progress report towards a more comprehensive future outcome.

Cross cut (integrated) assessments strategy:

- Include system descriptions focused on climate-related components,
- Important risks and key policy issues, thresholds, case studies,
- Integrated solution pathways...
- Information and research needs
- (needs more development)

Possible fast-track candidates:

- 1. Water /energy/land use (including agriculture, forestry)
- 2. Urban/infrastructure/vulnerability (part of the REQUIRED human social systems topic
- 3. Impacts of climate change on tribal/indigenous and native lands and resources (part of the REQUIRED human social systems topic)
- Land use/land cover change (approached as an integrated topic, e.g. how land use decisions of all kinds increase or decrease adaptation and mitigation capacity) (REQUIRED land resources topic)
- 5. Rural communities, agriculture, and development (part of REQUIRED human social systems topic)
- 6. Impacts on biogeochemical cycles, with implications for ecosystems and biodiversity

E. V. Biogeographical cross - cuts

This category of analyses is more focused on a biogeographically- or geophysically-based integrated investigations. Among the candidates are:

- Coastal zone, development and ecosystems (case studies SF Bay Delta, Chesapeake, Gulf Coast)
- Watersheds (case studies Great Lakes, Colorado River and Columbia River) (all include an international component)
- 3. Oceans and marine resources (major new chapter)

F. VI. Regions:

The group proposes eight regions (mostly the same regions as 2009 but boundaries based on states); these regions are consistent with the Regional-Sectoral report; the map appears below. As with sectors, start with 2009 report as the base, and update with new information. The proposed regions are:

- Northeast
- Southeast and Caribbean
- Midwest
- Great Plains
- Southwest
- Northwest
- Alaska and Arctic
- Hawaii and Pacific Islands

Regional Strategy:

The suggested approach would include: new climatologies and projections as developed by the Scenarios work group and work led by Ken Kunkel; key issues/vulnerabilities in the region would be identified and prioritized; indicators of interest would be identified and analyzed in terms of utility and availability of relevant data; outcomes of initial regional scenario planning discussions would be discussed; initial documentation of adaptation and mitigation efforts; important information needs; report on development of regional engagement networks, etc.

- Initially, focus on above questions for 2013 report based on regional workshops held during second half of 2011,
- Initiate a scenario planning process that uses new scenarios (climate and socioeconomic) in the ongoing process.
- Consider international climate-related issues for the region
- All regions must have some coverage in 2013 report;, some regions will be ready to
 make extensive use of new scenario information while others will not. Clearly identify
 "fast start" regions for 2013 and have a schedule for more complete efforts in other
 regions
- More detailed information can be deployed on web even if not included in official 2013 "report"

G. VII. Mitigation and Adaptation Chapter

The group has not yet identified the major focus of this chapter, but it is intended to include an assessment of the tradeoffs and interrelationships between adaptation and mitigation decisions. Potential topics to be included are:

- 1. Mitigation tracking efficacy (indicators), intended and unintended consequences, cost of alternative approaches, etc.
- Adaptation appropriate scale, tracking efficacy, unintended consequences
- 3. Links between mitigation and adaptation (case studies?)
- 4. Develop inventories of activity and risk based approaches
- 5. Linkages with disaster preparedness
- 6. Initiate assessments of effectiveness, e.g. design alternative approaches to data gathering and analysis
- 7. International linkages and priorities for the ongoing Assessment

H. VIII. An Agenda for Climate Change Science Chapter

This chapter would summarize all of the priority information needs (monitoring, observations, modeling, data management, vulnerability assessment, valuation, communications, education as well as climate impacts, climate drivers, etc.). These needs would be collected as an integral part of the engagement activities with regional and sectoral teams as a part of all aspects of the ongoing Assessment (e.g., within the regional, sectoral and cross-cutting evaluations; indicators; scenarios; modeling; observations, etc. gap analysis and priorities).

IX. The NCA Long-term Process – Vision and Future Deliverables Chapter

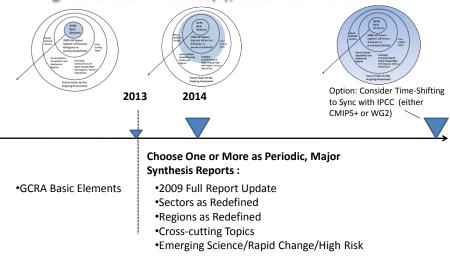
The intent of this chapter is to establish time frames and milestones and approaches that reinforce the continuing nature of the Assessment process, making it easier to anticipate resources needed and priorities for the future.

On-line Appendices

- Climate Change Science a primer
- Frequently asked questions about climate change and variability
- Scenarios and scenario guidance
- Assessment methodologies

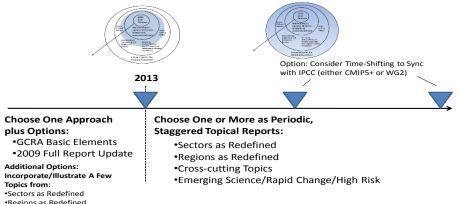
<u>RECOMMENDATION 3</u>: Adopt the revised Strategy document, subject to any changes agreed to by the Committee in the May 20 meeting.

Option 1: 2013 GCRA Basic Elements -High End 2014 Product(s), Later Full Vision



NCA Synthesis Reports

Option 2: 2013 Expanded with New Elements -Post 2013 Full Vision



- •Regions as Redefined •Cross-cutting Topics
- •Emerging Science/Rapid Change/High Risk

NCA Synthesis Reports

Option 3: Continuous Topical Product Stream, New Content, Light Snapshots

